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10/574,641

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EXAMINER

LINDSEY, MATTHEW S

ART UNIT

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2151

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/574,641	<b>Applicant(s)</b> SCHEIBLI, DANIEL	
	<b>Examiner</b> MATTHEW S. LINDSEY	<b>Art Unit</b> 2151	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 01 April 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

1. Claims 1-20 are pending in this application. Claims 1-8 are amended as filed on 01 April 2008. Claims 9-20 are new as filed on 01 April 2008.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**3. Claims 1-8, 11-13 and 16-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Kawata et al. (US 2002/0032777).**

4. With respect to Claim 1, Kawata discloses: “A method for use in a computer system comprising at least one first computer and one second computer (Fig 1, objects 107, and 108, and [0037], lines 6-8), the system for processing consecutive inquiries of an external computer ([0037], lines 4-8), the method comprising: observing the processing time that the first computer requires for processing a first inquiry of the external computer ([0082], lines 11-20), and rerouting of a second inquiry from the first computer to the second computer ([0040], lines 1-5) if the processing time exceeds a standard time ([0067], lines 3-8, where it is possible to select servers in a round-robin

fashion where if a load evaluation value of the selected server is at or greater than a threshold value the server is not selected and the next server in the round-robin is selected, and where the load evaluation value includes response time as shown by [0076], lines 1-7), the method being characterised in that the standard time is dependent on the type of inquiry ([0044], lines 11-14)".

5. With respect to Claim 7, Kawata discloses: "A computer-readable medium ([0104], lines 1-5) that stores a set of instructions that when executed performs a method of routing external computer inquiries ([0037], lines 4-8), the computer-readable medium executed by the set of instructions comprising: prompting an application to observe the processing time that a first computer requires for processing a first inquiry of an external computer ([0082], lines 11-20), and prompting the application to reroute a second inquiry from the first computer to the second computer ([0040], lines 1-5) if the processing time exceeds a standard time ([0067], lines 3-8, where it is possible to select servers in a round-robin fashion where if a load evaluation value of the selected server is at or greater than a threshold value the server is not selected and the next server in the round-robin is selected, and where the load evaluation value includes response time as shown by [0076], lines 1-7), wherein the standard time is dependent on the type of inquiry ([0044], lines 11-14)".

6. With respect to Claim 8, Kawata discloses: "A system for processing consecutive inquiries from an external computer ([0037], lines 4-8) comprising: a first computer

([0037], lines 10-12, specifically server A); a second computer ([0037], lines 10-12, specifically server B); and an application operative to observe the processing time that the first computer requires for processing a first inquiry of an external computer ([0082], lines 11-20) and to reroute a second inquiry from the first computer to the second computer ([0040], lines 1-5) if the processing time exceeds a standard time ([0067], lines 3-8, where it is possible to select servers in a round-robin fashion where if a load evaluation value of the selected server is at or greater than a threshold value the server is not selected and the next server in the round-robin is selected, and where the load evaluation value includes response time as shown by [0076], lines 1-7), wherein the standard time is dependent on the type of inquiry ([0044], lines 11-14)".

7. With respect to Claims 2, 11 and 16, Kawata discloses: "wherein the standard time is dependent on the configuration of the first computer ([0039], lines 1-4 and [0070], lines 1-15, where depending on the processing power of the server, the load evaluation levels differ)".

8. With respect to Claims 3, 12 and 17, Kawata discloses: "wherein the processing time is determined relative to a quantity of data ([0044], lines 11-14)".

9. With respect to Claims 4, 13 and 18, Kawata discloses: "wherein the processing times of consecutive inquiries are taken into account during observation ([0040], lines 1-

5, where the server with the lightest load is selected, hence the server that is processing the least intensive previous inquiries)".

10. With respect to Claim 5, Kawata discloses: "The method according to claim 1 wherein the step of observing is performed by an observer module ([0076], lines 1-7, where the load evaluation generation processing module generates load evaluation values) and the step of rerouting is performed by a rerouter module ([0069], lines 1-3, where the load balancer distributes service requests and [0067], lines 3-8, where if a load evaluation value is at or greater than a threshold value, the next server in the round robin is selected)".

11. With respect to Claim 6, Kawata discloses: "The method according to claim 1, wherein the steps of observation and rerouting are induced by a management program within the system ([0038], lines 1-5)".

### ***Claim Rejections - 35 USC § 103***

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**13. Claims 9, 14 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawata in view of Boyd et al. (US 7,251,691 B2).**

14. With respect to Claims 9, 14 and 19, Kawata does not disclose: “wherein the processing time is the floating average time that the first computer requires for processing a stipulated number of inquiries”.

However, Boyd discloses: “wherein the processing time is the floating average time that the first computer requires for processing a stipulated number of inquiries (Col. 3, lines 21-26, specifically moving average)”.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the load balancing system of Kawata with the teachings of Boyd to include support for floating, or moving averages. Motivation to combine these references comes from Boyd, where: “The operation of the present invention is autonomic by continuously updating the average latency time for each storage device. The updated average latencies for each storage device are used each time a new consistent transactions set is transferred to the peer computers for storage. The updated average latency time is based upon a moving average with adjustable weighting of past and present measurements. This enables the present invention to adapt to changing conditions” (Col. 3, lines 19-27). Therefore by combining the references the load balancing system of Kawata can include using moving averages to adapt to changing conditions.

**15. Claims 10, 15 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawata in view of Hayashi et al. (US 6,598,071 B1).**

16. With respect to Claims 10, 15 and 20, Kawata does not disclose: “wherein the standard time is fixed relative to a stipulated number of inquiries such that rerouting occurs only when the processing time exceeds the standard time in more than a predetermined number of allowed incidences”.

However, Hayashi discloses: “wherein the standard time is fixed relative to a stipulated number of inquiries (Col. 7, lines 56-67, where a response time results threshold must be exceeded a fixed number of times) such that rerouting occurs only when the processing time exceeds the standard time in more than a predetermined number of allowed incidences (Col. 7, lines 56-67, where a response time result exceeds a threshold a fixed number of times and Col. 8, lines 26-35 where a substitute server is used instead)”.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the load balancing system of Kawata with the teachings of Hayashi to include support for exceeding a threshold a predetermined number of times before rerouting requests. Motivation to combine these comes from Hayashi, where: “The reason for using a fixed number of times for measurement results exceeding the threshold values as a criterion for whether switching is needed or not, is that even if the response time is momentarily bad and exceeds the threshold value, the average traffic load will probably present no problems during communication if the number of times the



threshold value was exceeded is low” (Col. 7, lines 60-67). Therefore by combining the references needless rerouting can be avoided if the threshold value is exceeded less than a fixed number of times.

### ***Response to Arguments***

17. Applicant’s arguments, see pg 8, I. Claim Objections, filed 01 April 2008, with respect to claim objections of claims 7 and 8 have been fully considered and are persuasive. The objection of claims 7 and 8 has been withdrawn.

18. Applicant’s arguments, see pg 8, II. Claim Rejections Under 35 USC 101, filed 01 April 2008, with respect to claim rejection under 35 USC 101 of claim 7 has been fully considered and are persuasive. The rejection of claim 7 under 35 USC 101 has been withdrawn.

19. Applicant's arguments, see pgs 9-12, III. Claim Rejections Under 35 USC 102(b), filed 01 April 2008 have been fully considered but they are not persuasive.

Applicant argues Kawata fails to teach: “rerouting a second inquiry from the first computer to the second computer if the processing time exceeds a standard time” (pg 9 line 21 – pg 10 line 1), and. Examiner respectfully disagrees, Kawata discloses: “However, it would also be possible to select servers in a round-robin fashion, where **if**

**a the load evaluation value of the selected server is at or greater than a certain threshold value (i.e., the server is overloaded), the server is not selected and the next server in the round-robin is selected”** ([0067], lines 3-8), and where the load evaluation value includes response time, shown by [0076], lines 1-7. A load evaluation threshold value includes a standard response time, and when the selected servers load evaluation is at or greater than the threshold, the next server is selected.

Applicant further argues: “Kawata routes service requests by comparing the load evaluation values of the servers against each other, i.e. other load evaluation values” (pg 10, lines 17-19). Examiner respectfully disagrees, Kawata discloses: “However, it would also be possible to select servers in a round-robin fashion, where **if a the load evaluation value of the selected server is at or greater than a certain threshold value (i.e., the server is overloaded), the server is not selected and the next server in the round-robin is selected”** ([0067], lines 3-8). A comparison to a load evaluation threshold value, is not a comparison to another server load evaluation value.

Applicant further argues: “Nor do Kawata’s teachings allow a proper inference that rerouting occurs when the processing time exceeds a standard time” (pg 10, lines 21-22). Examiner respectfully disagrees, Kawata discloses: “However, it would also be possible to select servers in a round-robin fashion, where **if a the load evaluation value of the selected server is at or greater than a certain threshold value (i.e., the server is overloaded), the server is not selected and the next server in the round-**

**robin is selected**" ([0067], lines 3-8). If the next server selected has a load evaluation value less than a certain threshold value, the destination request address in the packet header of the service request packet is converted to the address of the server selected ([0066], lines 10-13).

Applicant further argues: "routing would nevertheless depend on a comparison of server load evaluation values and not a reference to a standard time" (pg 11, lines 6-8). Examiner respectfully disagrees, Kawata discloses: "However, it would also be possible to select servers in a round-robin fashion, where if a the load evaluation value of the selected server is at or greater than a certain threshold value (i.e., the server is overloaded), the server is not selected and the next server in the round-robin is selected" ([0067], lines 3-8). Comparison of the selected servers load evaluation value is made to a threshold load evaluation value. This threshold value is chosen so that if the load evaluation value of the server is at or greater than the threshold the server is overloaded. The load evaluation value is generated based on response time, see [0076], lines 1-7. Therefore the threshold load evaluation value will contain a response time chosen such that the server would be overloaded, which if exceeded will cause the next server to be selected.

Applicant argues "Further, claims 7 and 8, though they differ in scope from claim 1, contain recitations similar to those discussed above for claim 1 and are patentably distinguishable over the cited art" (pg 12, lines 2-4) and "because dependent claims 2-6,

and 9-20 necessarily include the recitations of their respective independent claims, none of the cited art teaches or suggests every limitation of the dependent claims” (pg 12, lines 5-7). Examiner respectfully disagrees, see reasons stated above.

### ***Conclusion***

20. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MATTHEW S. LINDSEY whose telephone number is (571)270-3811. The examiner can normally be reached on Mon-Thurs 7:30-5, Fridays 7:30-1.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on (571) 272-3964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MSL  
6/4/2008

/John Follansbee/

Supervisory Patent Examiner, Art Unit 2151